Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-39 and 43 are cancelled.

Claim 40 (previously presented): A method for determining if an individual has a predisposition to develop thrombosis due to inherited APC-resistance caused by a gene mutation, said method comprising the step of:

detecting in a cell sample from the individual the occurrence of a Factor V gene mutation;

wherein the mutation gives rise to the expression of a mutated Factor V/Va molecule, which expression is associated with the expression of APC-resistance and a predisposition to develop thrombosis.

Claim 41 (previously presented): The method of claim 40, wherein the mutation is detected as an abnormal absence or presence of a nucleic acid fragment or abnormal sequence in the Factor V gene, wherein the mutation is detected using nucleic acid hybridization.

Claim 42 (previously presented): The method of claim 40, wherein the mutation is determined indirectly based on linkage thereof to a neutral polymorphism in the Factor V gene.

Claim 44 (previously presented): The method of claim 40, wherein the Factor V gene mutation is detected as an abnormal absence or presence of a nucleic acid fragment or abnormal sequence caused by the mutation, wherein the Factor V gene mutation is detected using nucleic acid sequencing.

Claim 45 (previously presented): The method of claim 40, wherein the Factor V gene mutation is detected as an abnormal absence or presence of a nucleic acid fragment or abnormal

sequence caused by the mutation, wherein the Factor V gene mutation is detected using an immunoassay.

Claim 46 (previously presented): A method for detecting a predisposition to developing thrombosis in an individual, said method comprising determining the presence in the individual's Factor V gene sequence of at least one mutation and comparing the individual's Factor V gene sequence to a normal Factor V gene sequence.

Claim 47 (previously presented): A method for detecting a predisposition to developing thrombosis in an individual, said method comprising the steps of:

obtaining a cell sample from the individual; and

determining the presence of at least one Factor V gene mutation in the individual, wherein the presence of the Factor V gene mutation is indicative of an increased risk of thrombosis.

Claim 48 (previously presented): A method for detecting APC-resistance in an individual comprising the steps of:

obtaining a DNA sample from the individual; and

determining the presence of at least one Factor V gene mutation in the individual, wherein the presence of the Factor V gene mutation is indicative of an increased risk of thrombosis.

Claim 49 (previously presented): The method of claim 46, 47 or 48, wherein the Factor V gene mutation is a neutral polymorphism.

Claim 50 (previously presented): The method of claim 46, 47 or 48, wherein said determining step comprises sequencing the Factor V gene.

Claim 51 (previously presented): The method of claim 46, 47 or 48, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a normal Factor V gene.

Claim 52 (previously presented): The method of claim 46, 47 or 48, wherein said determining step comprises nucleic acid hybridization to a reagent specific for a Factor V gene that comprises at least one mutation associated with APC-resistance.